AMENDMENTS TO THE SPECIFICATION:

Please replace the paragraph beginning on page 25, line 3 with the following amended paragraph:

In this case, as shown in FIG. 7, the end points (a1, a2 in FIG. 7) of the limiting current region are determined on the condition that they are ~~wining~~within a range of a detection error allowed from the air-fuel ratio requirement accuracy, in other words, that the variation of the element current Ip is below a predetermined quantity, and the applied voltage line RG is set to pass through the intermediate point a3 between a1 and a2. The fact that the variation of the element current Ip is below the predetermined quantity also corresponds to the fact that the components other than a specific component (in this case, oxygen) do not undergo the decomposition or the like.

Please replace the paragraph beginning on page 31, line 12 with the following amended paragraph:

On the other hand, when the voltage at the point B becomes higher than Ref1+Ref3 in a lean atmosphere, the output of the comparator 41 becomes L and the output of the logical circuit 43 becomes H. Therefore, the switch 45 is turned on and the value of the feedback resistor becomes a value of a combined resistance of the resistors 33 and 46. Moreover, when the voltage at the point B drops below Ref1-Ref4 in a rich atmosphere, the output of the comparator 42 becomes L and the output of the logical circuit 43 becomes H. Therefore, the switch 45 is turned on and the value of the feedback resistor becomes a value of a combined resistance of the resistors 33 and ~~34~~46.